

Ship. 09/22

Work Order ID 166011

166011

Page 1

Thursday, September 07, 2017 1:18:07 PM

Item ID: D3177-043 Accept *N900040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: BRACKET

Start Date: 9/13/2017 Start Qty: 1.00 *1* Cust Item ID:
 Required Date: 9/22/2017 Req'd Qty: 1.00 *1* Customer:

Reference:

Approvals: Process Plan:  Date: SEP 07 2017 Tooling: Date: Run Start *NR1*
 QC: Date: SPC (Y/N): Date: Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3177	Rev B2								
100	BAND SAW	0.00							
100									
Bandsaw	Memo	0.51							
Jeaspa Bandsaw	Cut blank: 47.40" x (12.000" +0.100/-0.000)								
	Waterjet Blank								
110	HAAS CNC VERTICAL MACHINING #1	1.36							
110									
HAAS 1	Memo	2.44							
HAAS CNC vertical machine #1	Machine part as per Folio FA291 and Dwg D3177.Deburr								
120	QC2- Inspect parts off machine FAI/FAIB	0.00							
120									
QC	Memo	0.00							
Quality Control									

DAS
17-09-12
9-89

sc. mh
17/09/12

sc. mh
17/09/12

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition					
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100								Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	OTHER : ☐			

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 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 *130* QC Quality Control	QC8- Inspect parts - second check Memo	0.00 0.00				1	0		DAS 32 9-89 17-09-15
140 *140* HandFinish Hand Finishing	Chemical Conversion Coat per QSI005 4.1 Memo	0.00 0.33				①	0		2017-09-15 JSL BEB
150 *150* Small Fab Small Fab	Small Fab Memo Press D3177-5 Spacers as shown on Dwg D3177	0.00 0.15			DAS 30 9-89	1			SEP 19 2017

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WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____	
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY			
Environment ☐	☐ No Re-verification	☐ Pressure/Forced	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong		
Design ☐	☐ Operator	☐ Bending	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions		
Doc/Data ☐	☐ Offset/Setup	☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance		
Equip/Tooling ☐	☐ Supplier	☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect		
Handling/Pre ☐	☐ Training	☐ Crimp/Kink/Ripple/Wave	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing		
Material ☐	☐ Use for Testing	☐ Cuffs	☐ Contamination	☐ Out of Sequence	☐ Part Moved		
Internal Transport ☐	☐ Poor Information	☐ Crushing	☐ Countersink	☐ Off-set	☐ Drawing		
Tribal Knowledge ☐	☐ Rushing	☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Finish		
LOA ☐	☐ Product Improvement	☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread		
Substation ☐	☐ Process Improvement	☐ Marks/Chatter	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence		
Past Expiry Date ☐	☐ Manufacturing Process	OTHER : _____					
Misidentified ☐	☐ Past Due						

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Item ID: D3177-043 Accept *N900040100* Setup Start *NS1*
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 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start *NR1*
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160 *160* Powdercoat Powder Coating	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum <i>M13804</i> Memo START TIME: <i>1:50</i> OVEN TEMPERATURE: <i>220</i> FINISH TIME: <i>2:20</i>	0.00 0.24				<i>1</i>	<i>0</i>	<i>1709-19</i>	<i>36</i> <i>9-88</i>
170 *170* QC Quality Control	QC3- Inspect Part Finish Memo	0.00 0.00				<i>1X</i>			<i>17/09/20</i> <i>DAS</i> <i>36</i> <i>9-88</i>
180 *180* Small Fab Small Fab	Small Fab Memo Assemble as per Dwg D3177	0.00 0.27				<i>1X</i>			<i>17/09/20</i> <i>DAS</i> <i>36</i> <i>9-88</i>

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Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER : _____							

Work Order ID 166011***166011***

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Item ID: D3177-043 Accept ***N900040100*** Setup Start ***NS1***
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Item Name: BRACKET
Start Date: 9/13/2017 Start Qty: 1.00 ***1*** Cust Item ID:
Required Date: 9/22/2017 Req'd Qty: 1.00 ***1*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190 *190* QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.00				<u>1</u>	<u>0</u>	SEP 20 2017	DAS 9 9-89
200 *200* Packaging Packaging	Identify as per dwg & Stock Location: <u>57471</u> Memo	0.00 0.00				<u>1</u>	<u>6</u>	SEP 20 2017	DAS 9-89
210 *210* QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 0.00							

17/9/21/08
um 17/9/20

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
								Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	

Root Cause				FAULT CATEGORY			
Environment ☐	☐ No Re-verification	☐ Pressure/Forced	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong		
Design ☐	☐ Operator	☐ Bending	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions		
Doc/Data ☐	☐ Offset/Setup	☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance		
Equip/Tooling ☐	☐ Supplier	☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect		
Handling/Pre ☐	☐ Training	☐ Crimp/Kink/Ripple/Wave	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing		
Material ☐	☐ Use for Testing	☐ Cuffs	☐ Contamination	☐ Out of Sequence	☐ Part Moved		
Internal Transport ☐	☐ Poor Information	☐ Crushing	☐ Countersink	☐ Off-set	☐ Drawing		
Tribal Knowledge ☐	☐ Rushing	☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Finish		
LOA ☐	☐ Product Improvement	☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread		
Substation ☐	☐ Process Improvement	☐ Marks/Chatter	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence		
Past Expiry Date ☐	☐ Manufacturing Process	OTHER : _____					
Misidentified ☐	☐ Past Due						

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Page 1

Work Order ID: 166011

166011

Parent Item: D3177-043

D3177-043

Parent Item Name: BRACKET

Start Date: 9/13/2017

Required Date: 9/22/2017

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev: B03.01.27 Added Step 12KJ/RF

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
AN960JD10 *AN960.ID10* WASHER	<u>NAS1149D0363J</u>	Purchased	No			180	Each	0.0000	3	3			
									**				
BLRS-010 *BLRS-010* Quick Release Pin (1/4" x 1")		Purchased	No			180	Each	9.0000	1	1			
									**				
Location Loc Qty Loc Code													
FG 4													
121374 4													
ST557 5													
m138427 5													
D2690-6 *D2690-6* Lanyard		Manufactured	No			180	Each	33.0000	1	1			
									**				
Location Loc Qty Loc Code													
ST009 33													
164454 9													
165239 18													
165733 6													
D3177-5 *D3177-5* Spacer		Manufactured	No			180	Each	7.0000	4	4			
									**				
Location Loc Qty Loc Code													
st024 7													
95228 7													

3
 138336
 M138336
 DAS
 6
 9-89
 SEP 20 2017
 DAS
 6
 9-89
 SEP 20 2017
 DAS
 30
 9-89
 SEP 19 2017
 4

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____	
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : ☐							

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Work Order ID: 166011

166011

Parent Item: D3177-043

D3177-043

Parent Item Name: BRACKET

Start Date: 9/13/2017

Required Date: 9/22/2017

Start Qty: 1.00

Required Qty: 1.00

M6061T6B1.000X13.00
0

Purchased

No

100

f

0.0000

2

DAS 263

M6061T6B1 000X13 000

12.000

(this batch only)
M 138060

3.958

**

LT

1

17-09-10.

6061T6 Bar 1.00 X 12.00

MS21042L3

Purchased

No

180

Each

1,766.000

1

1

DAS
6
9-89

MS21042I 3

Nut

**

Location

Loc Qty

Loc Code

FP001

72

m135945

72

GA

336

m134360

102

M136665

234

OVER007

500

m138408

500

ST303

858

m138230

500

m138326

358

MS27039-1-11

Purchased

No

180

Each

231.0000

1

1

DAS
6
9-89

MS27039-1-11

Screw

**

Location

Loc Qty

Loc Code

ST280

231

m137544

31

m138326

200

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Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
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Parent Item Name: BRACKET

Start Date: 9/13/2017

Required Date: 9/22/2017

Start Qty: 1.00

Required Qty: 1.00

NAS1149D0363J

Purchased

No

180

Each

1,339.000

3

3

NAS1149D0363.I

**

DAS
6
9-89

Washer

Location

Loc Qty

Loc Code

GA

408

m137963

408

ST263

931

126319

16

m138336

915

3

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Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____		
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Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐		OTHER : ☐					

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RELEASED
03 01 21 *pt*

RELEASED
03 01 21

ENGRAVE LOGO AND P/N
IN AREAS SHOWN TO A MAX
DEPTH OF 0.010

9.000±0.005
0.557
1.000
3.733^{0.000}_{-0.005} (B)
0.625^{0.001}_{0.000} (TYP 2 PLACES) (B)
0.323
0.970^{0.010}_{0.000}
0.203 (TYP 3 PLACES)
0.557
0.200
0.200
2.607 (B)
SPOT FACE $\phi 1.070$ WITH
R0.032 TOOL TO MAINTAIN
0.970^{0.010}_{0.000} BETWEEN FACES
(4 PLACES)

D3177-5 SPACER
(4 PLACES)

MS27039-1-11 SCREW (1)
AN960JD10 WASHER (3)
D2690-6 LANYARD (1)
MS21042L3 NUT (1)
(1 PLACES)

BLRS-010 PIP PIN
(1 PLACES)

D3177-041 BRACKET

D3177-1
BRACKET

R0.125
(TYP)

10.776

2.376
0.300
0.200

0.700^{0.010}_{0.000} (B)
0.188^{0.010}_{0.000} (TYP)

DETAIL A

R0.625
(TYP) (B)
0.261 (TYP 2 PLACES) (B)

0.700^{0.010}_{0.000}

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A	02.12.03	NEW ISSUE
B	03.01.07	RE-DESIGN

D3177-041 BRACKET

- 1) MACHINE D3177-1 PER DART DWG "D3177-1.SLDPRT"
MATERIAL: 6061-T6 ALUMINUM BAR (QQ-A-250/11 OR QQ-A-200/8)
(REF DART SPEC. M6061T6S OR M6061T6B)
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 (PRIOR TO ASSEMBLY)
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3 (AFTER ASSEMBLY)
- 4) TOLERANCES ARE PER QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES

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NO 166

SEP 07 2017

DART

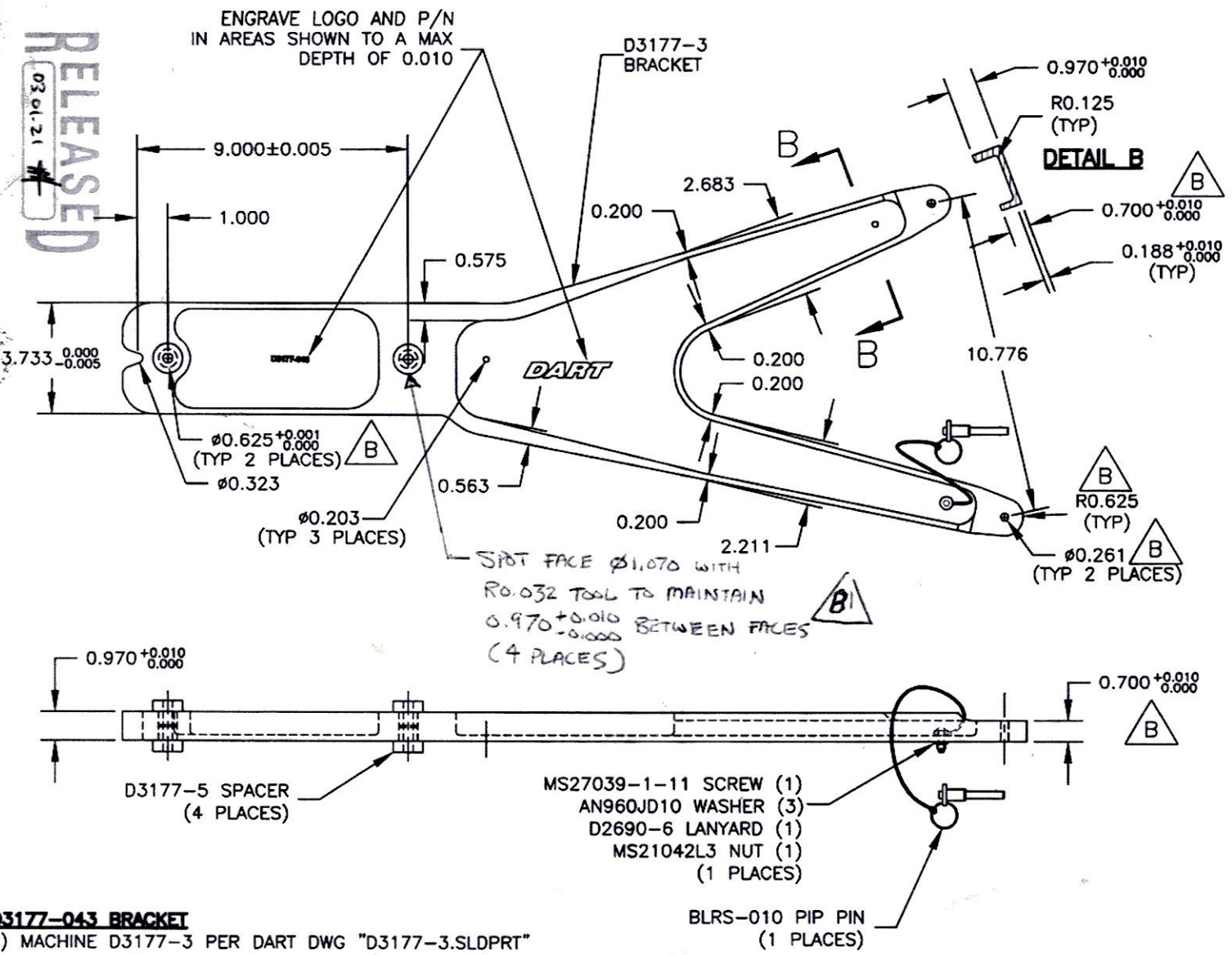


DESIGN	UPDOWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED	APPROVED	DRAWING NO.	REV. B
		D3177	SHEET 1 OF 3
DATE	TITLE		SCALE
03.01.07	BRACKET		1:5
A	02.12.03	NEW ISSUE	
B	03.01.07	RE-DESIGN	

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CHECKED	APPROVED	DRAWING NO. D3177
DATE 03.01.07	TITLE BRACKET	REV. B SHEET 2 OF 3
	SCALE 1:5	



D3177-043 BRACKET

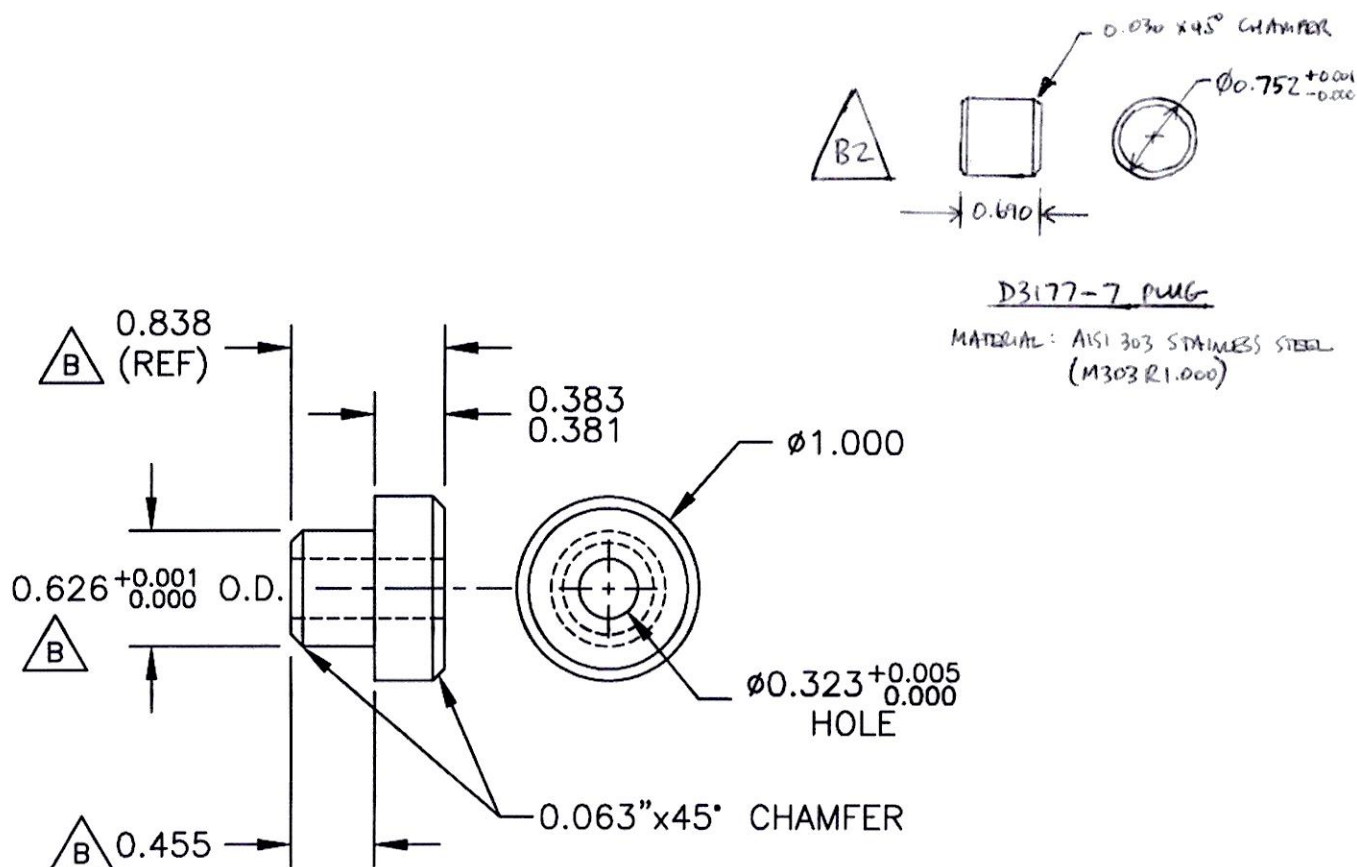
- 1) MACHINE D3177-3 PER DART DWG "D3177-3.SLDPRT"
MATERIAL: 6061-T6 ALUMINUM BAR (QQ-A-250/11 OR QQ-A-200/8)
(REF DART SPEC. M6061T6S OR M6061T6B)
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 (PRIOR TO ASSEMBLY)
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3 (AFTER ASSEMBLY)
- 4) TOLERANCES ARE PER QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES

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CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3177	REV. B SHEET 3 OF 3
DATE 03.01.07		TITLE BRACKET	SCALE 1:1



D3177-5

- 1) MATERIAL: 6061-T6 ALUMINUM BAR $\phi 1.000$
(QQ-A-200/8 OR QQ-A-225/8)
(REF DART SPEC. M6061T6R1.000)
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES

RELEASED
03 01-21 *[Signature]*

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D3065-5DART AEROSPACE LTD		Work Order: 16604
Description: Bracket		Part Number: D3177-3
Inspection Dwg: D3177 Rev: B2		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.970	+0.010/-0.000	0.977	✓		Mic 65011351	
R0.125	+/-0.010	R0.125	✓		R.G.	
0.700	+0.010/-0.000	0.708	✓		Mic 65011351	
0.188	+0.010/-0.000	0.197	✓		Mic 65011351	
10.776	+/-0.005	10.777	✓		H.G.	
R0.625	+/-0.010	.625	✓		Ver ED-6	
Ø0.261	+0.005/-0.000	Ø.261	✓		G.P.	
0.200	+/-0.010	.198	✓		Mic 65011351	
Ø0.203	+0.005/-0.000	Ø.203	✓		G.P.	
Ø0.625	+0.001/-0.000	.625	✓		Ver ED-6	
3.733	+0.000/-0.005	3.732	✓		Ver ED-6	
0.575	+/-0.010	.570	✓		Mic 65011351	
0.700	+0.010/-0.000	.706	✓		"	
0.970	+0.010/-0.000	.972	✓		Mic 65011351	

Measured by: SK	Audited by: DAS 32 9-89	Prototype Approval:	N/A
Date: 17/09/12	Date: 17-09-12	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	04.02.25	New Issue P/O D3177-041/-043	KJ/RF	TH